Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**Notes Questions for the Unit 2, Part 1 Notes – Macroevolution and Speciation**

Mrs. Krouse, AP Biology, 2015-2016

***Vocabulary:*** *For each of the terms listed below, fill in the definition given in the notes in the first column. In the second column, I may ask you to break down a term into its parts to better understand its meaning.*

|  |  |  |
| --- | --- | --- |
| **Vocabulary Term and Synonyms** | **Definition(s) Given in the Notes** | **Memory Trick and / or** **Breaking down the Word** |
| Microevolution |  | **Breaking Down the Word:** Look up the meaning of “micro.” How does this help clarify the meaning of the term? |
| Macroevolution |  | **Breaking Down the Word:** Look up the meaning of “macro.” How does this help clarify the meaning of the term? |
| Speciation |  | You don’t need to fill in this column for this term ☺ |
| Species |  | You don’t need to fill in this column for this term ☺ |
| Reproductive Isolation |  | You don’t need to fill in this column for this term ☺ |
| Pre-zygotic barriers (aka isolating mechanisms) |  | **Breaking Down the Word:** How do “pre” and “zygote” help clarify the meaning of this term? |
| Post-zygotic barriers (aka isolating mechanisms) |  | **Breaking Down the Word:** How do “post” and “zygote” help clarify the meaning of this term? |
| Sympatric Speciation |  | **Breaking Down the Word:** “Sym-” is derived from “syn-“, which means “together.” How does this help clarify the meaning of this term? |
| Geographic Isolation |  | You don’t need to fill in this column for this term ☺ |
| Allopatric Speciation |  | **Breaking Down the Word:** “allo” means “other” or “different.” How does this help clarify the meaning of this term? |
| Divergent Evolution |  | **Breaking Down the Word:** Look up the meaning of “diverge.” How does this help clarify the meaning of the term? |
| Adaptive Radiation |  | **Breaking Down the Word:** Look up the meaning of “radiate.” How does this help clarify the meaning of the term? |
| Convergent Evolution |  | **Breaking Down the Word:** Look up the meaning of “converge.” How does this help clarify the meaning of the term? |
| Coevolution |  | **Breaking Down the Word:** Look up the meaning of “co.” How does this help clarify the meaning of the term? |
| Gradualism |  | **Breaking Down the Word:** How does “gradual” help clarify the meaning of this term? |
| Punctuated Equilibrium |  | **Breaking Down the Word:** How do “punctuate” and “equilibrium” help clarify the meaning of this term? |

***Practice Questions:*** *Answer the following questions thoroughly and accurately in complete sentences.*

1. Explain how geographic isolation can eventually result in a reproductive barrier forming between two populations. (Hint: You can use the example of the two populations of monkey separated by a river if you’d like!)
2. Identify each of the following “isolating mechanisms” as pre-zygotic or post-zygotic and provide a brief, one-phrase description of each. I have given an example of a “catch phrase” for one of the isolating mechanisms given below.

|  |  |  |
| --- | --- | --- |
| **Isolating Mechanism** | **Pre-zygotic or post-zygotic? (just write “Pre” or “Post”)** | **Description** |
| Reduced Hybrid Fertility |  |  |
| Gametic Isolation |  |  |
| Mechanical Isolation |  | “It” doesn’t fit! |
| Reduced Hybrid Viability |  |  |
| Behavioral Isolation |  |  |
| Hybrid Breakdown |  |  |
| Temporal Isolation |  |  |
| Habitat Isolation |  |  |

1. When is adaptive radiation more likely to occur… when there are many new niches (roles in the environment that species can fill) or when the number of niches is reduced?
2. Describe one piece of evidence scientists have to indicate that evolution has proceeded according to the “gradualism” model at various points in the history of life.
3. Describe one piece of evidence scientists have to indicate that evolution has proceeded according to the “punctuated equilibrium” model at various points in the history of life.